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LAND USE PLAN



CHADBOURN, NORTH CAROLINA

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INTRODUCTION

Based on extensive research and analysis of physical, economic, and social conditions, as well as local traditions and desires, a land use plan for the Town of Chadbourn was compiled in December, 1966. This original plan described existing community conditions and made recommendations for future community development and land utilization. Since the component elements on which the plan was based are subject to change over time and to determine the extend of plan implementation, it is necessary to re-evaluate and update the initial land use plan. Thus, it is the purpose of this study to accomplish the preceding task and translate the findings into an updated land use plan that will continue to serve as a useful guide for future physical development and related policy formulation.

SUMMARY

The following statements briefly summarize the most significant points of this study.

SALIENT POINTS AFFECTING LAND USE

1. Seven miles east of Chadbourn is Whiteville, the county seat. Considerable development is already in progress between the two municipalities along N.C. 130.
2. Historically, Chadbourn has been an agriculturally oriented community.
3. The planning area is basically flat with several flood problems along streams and ditches. Thus, most of the planning area's terrain is conducive to development.
4. Most of the soils in the planning area are generally conducive to development. Some soils -- the Lynchburg, Goldsboro, and Dunbar series -- would be more useful for urban purposes after drainage projects are completed. Other soils -- Rains, Coxville, and Plummer -- present problems to development since they are poorly drained. These soils are located along intermittent water courses and flowing streams.
5. Chadbourn's climate is conducive to most all types of land use.
6. Chadbourn's population has fluctuated over the past seventy years with population gains and losses between decades.
7. Out-migration has occurred between 1960 and 1970 in most age groups with out-migration of nonwhites exceeding that of whites.

8. Chadbourn is a family oriented community with a rather equal distribution of males and females.
9. Out-commuting of county residents to work increased substantially between 1960 and 1970.
10. Agriculture and agricultural related jobs have declined in the county, while manufacturing related jobs have increased slightly. The decline in agriculture is likely to continue until a stabilization point is reached where only large mechanized farms that require a minimum labor need exist.
11. There is a sizeable pool of recruitable workers in the Chadbourn planning area.
12. Most sections of town are served by public water and sewer lines with a public water line extending to Southeastern Community College and the Georgia Pacific Company and a sewer line extending to Georgia Pacific. These lines extend east of the corporate limits toward Whiteville, thus increasing the possibility that future growth will occur between the two municipalities.
13. A feasibility study on water and wastewater facilities for Central Columbus County has been completed. Implementation of the projects suggested in this study remains uncertain.
14. 201 Facilities Planning is being considered.
15. Urban land uses should not interfere with drainage channels.
16. The predominate land use in the planning area includes vacant and agricultural land with residential land use being the second largest land consumer.
17. The most significant development involving the transportation network of the planning area has been the completion of the new U.S. 74 and 76, north of the corporate limits. If these routes are to adequately serve as a bypass, development along these routes should be precluded or at least, access should be limited.
18. Chadbourn's goals and objectives for land use may be summarized by stating that orderly growth, a decent living environment, an efficient and safe circulation system, adequate public services, and a revitalized economy are to be sought.

LAND USE PLAN

Residential Land Use

The plan provides for various housing types by encouraging different housing densities per acre. Generally, high density development is encouraged within the corporate limits of Chadbourn and low density development is encouraged in the one-mile fringe area.

Commercial Land Use

1. The plan provides for a variety of commercial activities of differing nature by providing for a Central Business District, neighborhood businesses, and highway serving businesses. This will provide area residents with choice and convenience in shopping.
2. Revitalization of the Central Business District is encouraged and strip commercialism is discouraged.

Industrial Land Use

Proposed industrial activities are located within the corporate limits of Chadbourn in areas which provide a range of choice to developers. Industrial land utilization outside the corporate limits consists of industrial uses already in existence.

Social and Cultural Land Use

Emphasis is placed on the development of current facilities, such as the community park adjacent to Miller Street.

Open Space land Utilization

Encroachment of natural drainage channels by urban land uses is discouraged.

Thoroughfare Plan

1. The state Highway Commission and the Town of Chadbourn mutually adopted a thoroughfare plan in 1966 which should guide major thoroughfare development. All proposed changes in land utilization should be in conjunction with the thoroughfare plan.
2. Upgrading of local streets maintained by the town is being encouraged.
3. The most significant new street construction is expected to be in conjunction with new residential neighborhoods. These streets are required to conform to the town's subdivision regulations.

PLAN IMPLEMENTATION

1. The major enforcement tools of this Land Use Plan will be the town's zoning ordinance and subdivision regulations. Therefore, it is very important that these regulations be up-to-date and strictly enforced.
2. All housing and building codes should be strictly enforced.
3. Chadbourn should prepare a Central Business District study and a recreation plan.
4. Chadbourn should participate in the North Carolina Governor's Award Program to help prepare for new industries.
5. Local streets should be upgraded through Powell Bill funds or local revenue.
6. Proper street alignment is encouraged.
7. Citizen participation is encouraged.
8. Revitalization of the Town Planning Board is encouraged. This is very important if any effective planning program is to be maintained. The board should actively engage in planning and not be merely a "zoning" board.

ENVIRONMENTAL ASSESSMENT STATEMENT

This plan encourages maximum environmental protection.

BACKGROUND REPORT

This section describes the physical, economic, and social conditions of the Chadbourn Planning Area. These elements are perhaps the most important determinants of the extent of growth in the future, which local citizens and decision makers must understand in order to predict and plan for the future.

Regional Setting

With a 1973 estimated population of 2,280, Chadbourn is the third largest community in Columbus County, which is located in the fertile agricultural upper Coastal Plain region of Southeastern North Carolina (Figure 1). Seven miles east of Chadbourn is Whiteville, the county seat, and fifty-five miles to the north is Fayetteville, the largest city in the region and a rapidly expanding urban area. Fifteen miles to the south is the North Carolina - South Carolina state line.

Planning Area

The planning area includes the Town of Chadbourn and a one-mile fringe area encompassing the town. The one-mile area was originally defined in 1966 by establishing a radius one-mile from the town's corporate limits. Because of changes in Chapter 160A, Article 19 of the General Statutes of North Carolina, requiring the one-mile extraterritorial jurisdiction boundary to conform, as much as possible, to natural geographic features, the boundary was redefined in May, 1975. In most instances, the town still plans and controls development one-mile from the corporate limits (Figure 2).

Historical Setting

Before incorporation in 1882 as Chadbourn, the town was known as Timberville, a sawmill village and shipping point for naval stores produced at nearby turpentine distilleries. The town was named for the Chadbourn family of Wilmington, owners of the sawmill and 10,000 acres of timberland. The original charter of incorporation set the corporate limits as a one-mile square with the center located near the present intersection of the Seaboard Coastline Railroad and Brown Street (NC410). In 1927, the corporate limits of Chadbourn were expanded an equal distance in all directions to include an area of two square miles. Since that time, the town has annexed only two small areas--one on the east and one on the north side of town.

Because of the severe winter of 1892 and the drought of 1893 in the Midwest and the ambitious efforts of State Senator J. A. Brown of Chadbourn, the town



REGIONAL SETTING

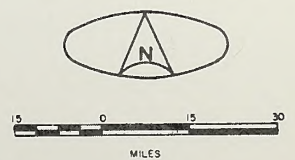


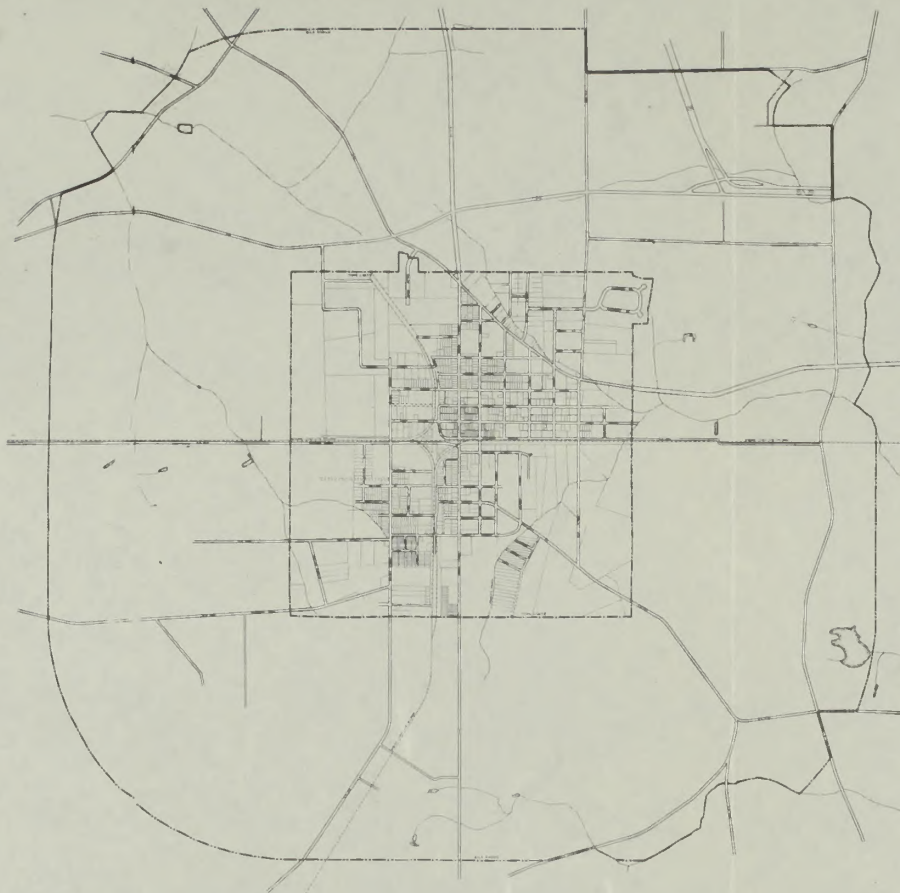
Figure 1

PLANNING AREA

CHADBOURN
NORTH CAROLINA



PLANNING AREA



CHADBOURN
NORTH CAROLINA



THE INFORMATION ON THIS MAP WAS OBTAINED FROM THE
U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20506
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Figure 2

was destined to become an agricultural center of Columbus County. Several hundred Midwesterners migrated to Columbus County and enthusiastically engaged in agricultural activities with emphasis placed on strawberry production. From 1897 - 1907, these efforts brought Columbus County and Chadbourn to the forefront of the North Carolina agricultural scene, as the strawberry crop alone brought more than \$3,000,000.00 into the county.

Today, Chadbourn and Columbus County are still basically agriculturally oriented. Although strawberries remain a distinct part of the agricultural scene, tobacco, cotton, sweet potato curing, meat packing, and peanut processing are important agricultural marketing activities. As a supplement to agriculture, Chadbourn has a veneer plant and textile mill, as well as a number of small nonagricultural related retail businesses.

Topography

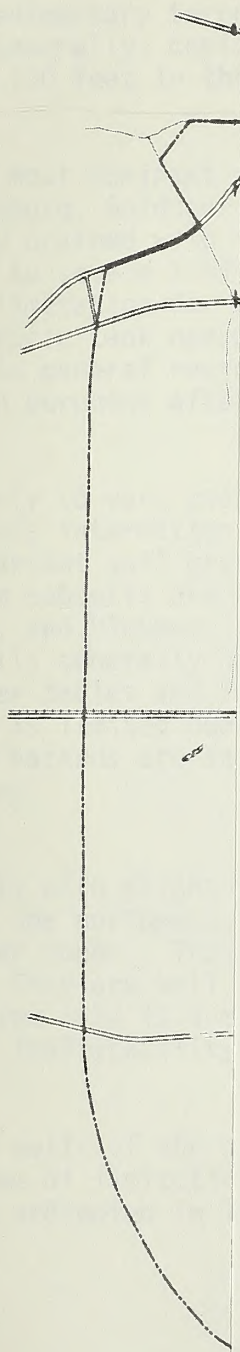
When planning future land use, topographic features should be considered. For example, commercial development would be economically impractical on steep slopes because of such inhibiting factors as the difficulty in parking and accessibility. Structural development of any type in flood plain areas provides another excellent example of poor land management. Not only is the development itself subject to flood damages, but areas up and down stream would face increased flooding potential as natural vegetation is reduced. Conversely, both steep slopes and flood plain areas may be quite suitable for recreational purposes.

Chadbourn is located on the upper Coastal Plain of Southeastern North Carolina, an area of generally flat terrain that is infrequently broken by higher terrace lands. The town has an elevation of 108 feet above sea level. Undeveloped lands in the planning area are covered by pines and by low-lying shrub cover. Most of this terrain would have little effect on urban development. Several exceptions to this generalization include areas that may be prone to flooding. These areas are identified on Figure 3.

Soils

Because various soils have different characteristics, thereby placing limitations on the potential use of land, it is necessary to review the types of soils that are prevalent in an area prior to determining future land uses. For example, soils with poor absorbability would present problems for any residential development which bases its sewerage disposal on a septic tank system.

The underlying geologic structures of the Upper Coastal Plain area of Southeastern North Carolina are of Post-Cambrian origin. The strata are



FLOOD PRONE AREAS

Source: HUD, Federal Insurance
Administration, May 24, 1974

CHADBOURN
NORTH CAROLINA



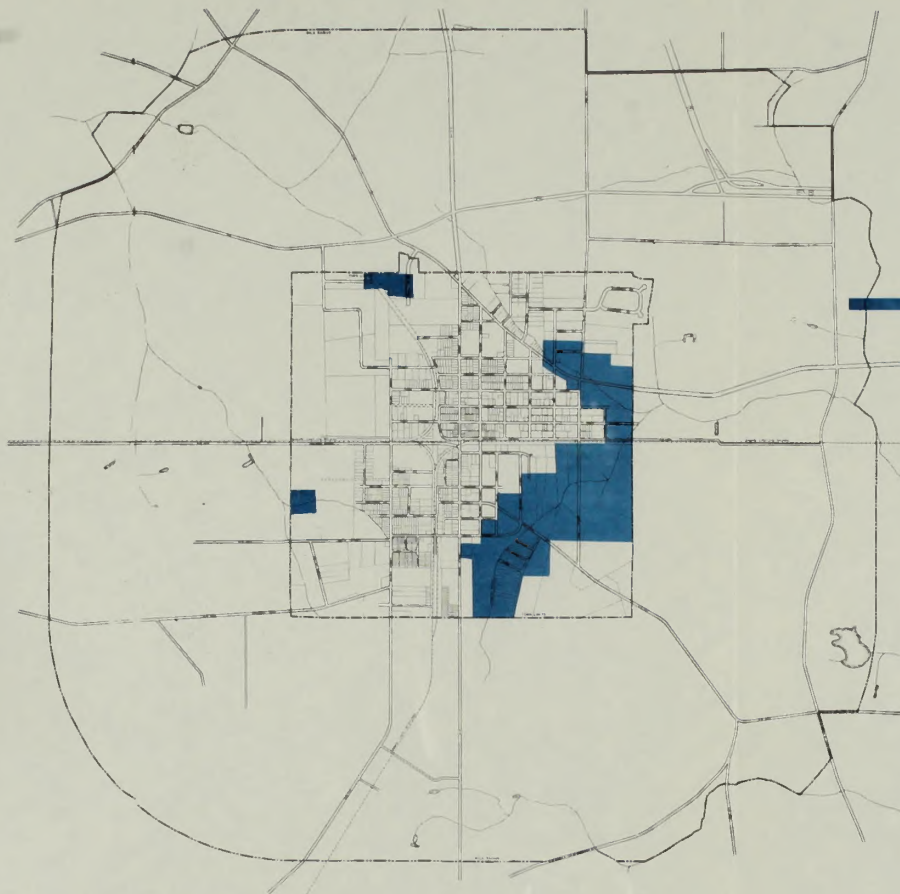
Figure 3

FLOOD PRONE AREAS

LEGEND

Flood Prone Areas

Source: HUD, Federal Insurance
Administration, May 24, 1974



CHADBOURN
NORTH CAROLINA



THE SOURCE OF THE DATA FOR THIS MAP IS THE
FEDERAL INSURANCE ADMINISTRATION (FIA).
THE FIA DATA IS BASED ON AERIAL PHOTOGRAPHS
AND SURVEY DATA. THE FIA DATA IS NOT
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Figure 3

marine sedimentary terraces belonging to the Eicommico and Sunderland formations. Generally, copious amounts of ground water can be taken from depths of 80 to 150 feet in the underlying sandy, shell-like acquifers.

The most dominant soils in the Chadbourn area are fine sandy loams of the Lynchburg, Goldsboro, and Dunbar series. These soils are moderately well to poorly drained with firm, slowly permeable subsoils. They generally have moderate to severe limitations for urban land uses; high water tables are a general limitation for all uses, the slow percolation rates with some soils hamper septic tank operations, and there are trafficability and flooding hazards to general recreation uses. These soils would become far more useful for urban purposes after drainage projects are completed.

Poorly to very poorly drained sands and sandy loams located in low lying areas along intermittent water courses and flowing streams are the second most important soil groupings in the Chadbourn Planning Area. Friable to very firm subsoils are common occurrences. The predominant series are Rains, Coxville, and Plummer. Wet, alluvial land is also found in all sections. These soils generally have limitations for urban land uses due to seasonably high water tables and flooding. In the Coxville and Bladen series, septic tank use is limited due to slow percolation rates. The trafficability and flooding hazards are severe limitations for recreation uses for practically all series.

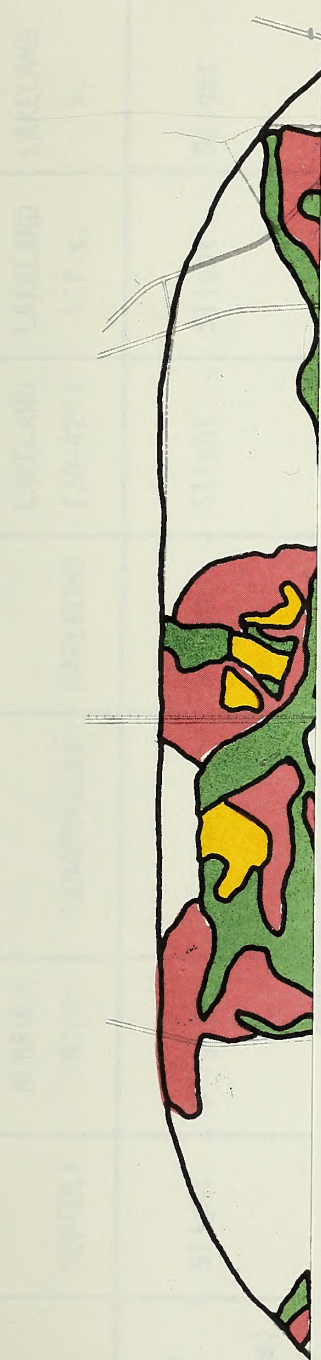
Soils with slight to moderate limitations for urban land uses are largely found in the northwest, northeast, and southeast sections of the planning area in smaller zones. These terrace soils are mostly of the Norfolk and Marlboro series. They are well drained with sandy surfaces and friable subsoils. The percolation rate is a moderate limitation to septic tank use in the Marlboro series. Trafficability is a problem in the Norfolk Loamy Fine Sand.

The soils of the planning area are graphically portrayed in Figure 4. The degree of limitation and chief limiting properities for selected urban land uses are presented in Table 1.

Climate

Chadbourn is located in the humid climate zone. Temperatures and precipitation vary seasonally, with mild temperatures and moderate rainfall prevailing. The winter (January) temperature range is from 38 to 62 degrees Fahrenheit, with little frost penetration. Winters in Chadbourn are short with an average frost-free growing season of 240 days. The summer (July) temperature range is from 70 to 90 degrees. Precipitation is generally well distributed throughout the year. The average annual precipitation is 48 inches with precipitation occurring mostly as rain. Prevailing winds are from a southwesterly direction.

SOIL SERIES IN THE CHESAPEAKE BASIN: EFFECT OF LIMITATION FOR GROWTH, LIMITING PROPERTIES, AND LAND-USE



SELECTED LAND-USE

Field and Pasture
Native Plantation
Timber
Fruit and Nut
Timber Plantation

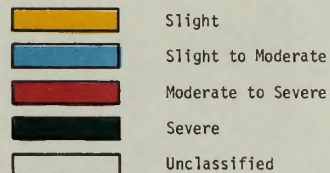
CHADBOURN
NORTH CAROLINA



Figure 4

GENERALIZED SOIL
SUITABILITY FOR URBAN LAND USE

Use Limitations



Source: Soil Conservation Service,
U.S. Dept. of Agriculture
Raleigh, N.C., Sept., 1965

CHADBURN
NORTH CAROLINA



Figure 4

SOIL SERIES IN THE CHADBOURN AREA, DEGREE OF LIMITATION AND CHIEF LIMITING PROPERTIES FOR SELECTED URBAN LAND USES

SELECTED URBAN LAND USES	NORFOLK	NORFOLK THICK	KENANSVILLE	MARLBORO	LAKELAND (30-42")	LAKELAND 1.f.s.	LAKELAND s.
Road and Railroad Construction (Where construction involves limited cut and fill and limited preparation of subgrade).	Slight	Slight	Slight	Slight	Slight	Slight	Slight
	Slight	Slight	Slight	Slight	Slight	Slight	Slight
Industrial Buildings (Includes buildings for stores, offices, and small buildings, none of which are more than three stories high. It is assumed that they have public or community sewage disposal system).	Slight	Slight	Slight	Moderate Perc.	Moderate Low Filtering Action	Moderate Low Filtering Action	Moderate Low Filtering Action
	Slight	Slight	Slight	Slight	Slight	Slight	Slight
Septic Tanks	Slight	Slight	Slight	Slight	Slight	Slight	Slight
Basement Construction	Slight	Slight	Slight	Slight	Slight	Slight	Slight
Recreation (General)	Slight	Moderate Traf.	Slight	Slight	Moderate Traf.	Moderate Traf.	Moderate Traf.

KEY: Traf. - Trafficability; Perc. - Percolation; WT - Water Table; Fl. - Flooding; and TSC - Traffic Supporting Capacity
 SOURCE: William A. Collier, Jr., Land Use Survey and Analysis, Chadbourn, North Carolina, Fayetteville, (April, 1966).

SOIL SERIES IN THE CHADBURN AREA, DEGREE OF LIMITATION AND CHIEF LIMITING PROPERTIES FOR SELECTED URBAN LAND USES

SELECTED URBAN LAND USES	CRAVEN	LENOIR	LOCAL ALLUVIAL	GOLDSBORO	GOLDSBORO THICK	GOLDSBORO SANDY SUBSTRATOM	LYNCHBURG	LYNCHBURG THICK
Road and Railroad Construction (Where construction involves limited cut and fill and limited preparation of subgrade)	Moderate TSC	Severe WT TSC	Moderate WT	Slight to Moderate	Slight to Moderate WT	Slight to Moderate WT	Severe WT	Severe WT
	Moderate Sh-Sw	Severe FL Sh-Sw WT	Severe WT	Moderate WT	Moderate WT	Moderate WT	Severe WT	Severe WT
Industrial Buildings (Includes buildings for stores, offices, and small buildings, none of which are more than three stories high. It is assumed that they have public or community sewage disposal system).	Severe Perc.	Severe WT Perc. FL	Severe WT	Moderate WT	Moderate WT	Moderate WT	Severe WT	Severe WT
	Moderate WT	Severe WT	Severe WT	Moderate WT	Moderate WT	Moderate WT	Severe WT	Severe WT
Recreation (General)	Moderate Traf.	Severe Traf.	Severe FL	Moderate Traf.	Moderate Traf.	Moderate Traf.	Severe Traf. FL	Severe Traf. FL

KEY: Traf. - Trafficability; Perc. - Percolation; WT - Water Table; FL - Flooding; and TSC - Traffic Supporting Capacity

SOURCE: William A. Collier, Jr., Land Use Survey and Analysis, Chadbourn, North Carolina, Fayetteville, (April, 1966).

SOIL SERIES IN THE CHADBURN AREA, DEGREE OF LIMITATION AND CHIEF LIMITING PROPERTIES FOR SELECTED URBAN LAND USES

SELECTED URBAN LAND USES	LYNCHBURG SANDY SUBSTRATUM	DUPLIN	DUNBAR	WOODSTON	DRAGSTON	KLEJ SHALLOW	KLEJ	LAKEHURST
Road and Railroad Construction (Where construction involves limited cut and fill and limited preparation of subgrade).	Severe WT	Slight to Moderate	Severe WT	Slight to Moderate	Severe WT	Severe WT	Severe WT	Severe WT
	Severe WT	Moderate WT	Severe WT	Moderate WT	Severe WT	Severe WT	Severe WT	Severe WT
<u>Industrial Buildings</u> (Includes buildings for stores, offices, and small buildings, none of which are more than three stories high. It is assumed that they have public or community sewage disposal system).	Severe WT	Moderate WT Perc.	Severe WT Perc.	Moderate WT	Severe WT	Severe WT	Severe WT	Severe WT
	Severe WT	Moderate WT	Severe WT	Moderate WT	Severe WT	Severe WT	Severe WT	Severe WT
<u>Septic Tanks</u>	Severe WT	Moderate WT Perc.	Severe WT Perc.	Moderate WT	Severe WT	Severe WT	Severe WT	Severe WT
<u>Basement Construction</u>	Severe WT	Moderate WT	Severe WT	Moderate WT	Severe WT	Severe WT	Severe WT	Severe WT
<u>Recreation (General)</u>	Severe Traf. FL	Moderate Traf.	Severe Traf. FL	Moderate Traf.	Severe FL WT	Moderate Traf. WT	Moderate Traf. WT	Severe WT

KEY: Traf. - Trafficability; Perc. - Percolation; WT - Water Table; FL - Flooding; and TSC - Traffic Supporting Capacity

SOURCE: William A. Collier, Jr., Land Use Survey and Analysis, Chadbourn, North Carolina, Fayetteville, (April, 1966).

SOIL SERIES IN THE CHADBURN AREA, DEGREE OF LIMITATION AND CHIEF LIMITING PROPERTIES FOR SELECTED URBAN LAND USES

SELECTED URBAN LAND USES	RAINS	PORTSMOUTH f.1.s.	PORTSMOUTH 1.	COXVILLE	BLADEN	POCOMOKE	ALLUVIAL LAND WET
<u>Road and Railroad Construction</u> (Where construction involves limited cut and fill and limited preparation of subgrade).	Severe WT	Severe WT	Severe WT	Severe WT TSC	Severe WT TSC	Severe WT	Severe WT FL
	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT FL
<u>Industrial Buildings</u> (Includes buildings for stores, offices, and small buildings, none of which are more than three stories high. It is assumed that they have public or community sewage disposal system).	Severe WT	Severe WT	Severe WT	Severe WT Perc.	Severe WT Perc.	Severe WT	Severe WT FL
	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT
<u>Septic Tanks</u>	Severe WT	Severe WT	Severe WT	Severe WT FL	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL
<u>Basement Construction</u>	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT	Severe WT
<u>Recreation</u> (General)	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL

KEY: Traf. - Trafficability; Perc. - Percolation; WT - Water Table; FL. - Flooding; and TSC - Traffic Supporting Capacity

SOURCE: William A. Collier, Jr., Land Use Survey and Analysis, Chadbourn, North Carolina, Fayetteville, (April, 1966).

SOIL SERIES IN THE CHADBURN AREA, DEGREE OF LIMITATION AND CHIEF LIMITING PROPERTIES FOR SELECTED URBAN LAND USES

SELECTED URBAN LAND USES	LOCAL ALLUVIAL WET	PLUMMER	RUTLEDGE	ST. JOHNS
<u>Road and Railroad Construction</u> (Where construction involves limited cut and fill and limited preparation of subgrade).	Severe WT FL	Severe WT	Severe WT	Severe WT
<u>Industrial Buildings</u> (Includes buildings for stores, offices, and small buildings, none of which are more than three stories high. It is assumed that they have public or community sewage disposal system).	Severe WT FL	Severe WT	Severe WT	Severe WT
<u>Septic Tanks</u>	Severe WT FL	Severe WT	Severe WT	Severe WT
<u>Basement Construction</u>	Severe WT	Severe WT	Severe WT	Severe WT
<u>Recreation (General)</u>	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL	Severe Traf. FL

KEY: Traf. - Trafficability; Perc. - Percolation; WT - Water Table; FL - Flooding; and TSC - Traffic Supporting Capacity

SOURCE: William A. Collier, Jr., Land Use Survey and Analysis, Chadbourn, North Carolina, Fayetteville, (April, 1966).

POPULATION

Planning Area Population

According to the U. S. Bureau of the Census, Chadbourn had a 1970 population of 2,213. The State of North Carolina, Department of Administration, Office of State Management Systems, has estimated the 1973 - 1974 population of Chadbourn to be 2,280. Aside from using township population figures as a representation of Chadbourn's extraterritorial jurisdiction area, a present population of 919 may be used as an approximate figure.¹ Obviously, this is only a rough figure, but greater accuracy is impossible, since the necessary data is not available. When this estimated figure is combined with the estimated 1973 - 1974 population for the Town of Chadbourn, the total population for the planning area is estimated to be 3,199.

Historical Trends and Projections

With the exception of the decade 1920 to 1930, Chadbourn's population increased steadily between the years 1900 to 1960. Between 1960 and 1970, however, the population again decreased (Table 2). In Chadbourn Township, similar trends are apparent. In Columbus County, the population increased at a moderate growth rate between 1900 and 1950, but began to decrease at a modest rate between 1950 and 1970. Much of these population changes may be attributed to fluctuations in the field of agriculture, since Columbus County is basically agriculturally oriented.

In comparing 1960 and 1970 census data on age and sex, an indication of what types of people played a part in the population decline for Chadbourn and Chadbourn Township may be obtained (Table 3). This may be accomplished by comparing an age group in 1960 with an age group ten years later. For example, a comparison may be made between ages 15 - 24 in 1960 and ages 25 - 34 in 1970. From the data, it is apparent that most age groups in the town and township experienced some out-migration.

A further indication of out-migration for the Town of Chadbourn can be ascertained through the child population expansion ratio, which was .900 in 1970. The child population expansion ratio measures the growth of a population through expansion of the number of children. It sets a ratio of the number of children aged 5 - 9 to the number of children aged 10 - 14. The ratio should be near 1.000 for a population which is replacing itself and below 1.000 for a declining

¹This figure was derived by multiplying the number of dwelling units (240) in this area by the average number of persons per household. The average number of persons per household for this area was derived by averaging the average number of persons per household in the Town of Chadbourn (3.67) and Chadbourn Township (3.99). Thus, $240 \times 3.83 = 919$. The number of dwelling units in the area was obtained from a July, 1975 land use survey conducted by the Division of Community Assistance and the number of persons per household for the town and township was obtained from the U. S. Bureau of the Census.

TABLE 2
POPULATION TRENDS FOR COLUMBUS COUNTY
CHADBOURN TOWNSHIP, AND CHADBOURN, 1900 - 1970

YEAR	COLUMBUS COUNTY	CHADBOURN TOWNSHIP	CHADBOURN
1900	21,274	1,563	243
1910	28,020	2,945	1,242
Percent Change	+31.2	+88.4	+411.1
1920	30,124	1,719	1,121
Percent Change	+7.5	-41.6	-9.7
1930	37,720	3,922	1,311
Percent Change	+25.2	+128.2	+16.9
1940	45,663	4,632	1,576
Percent Change	+21.1	+18.1	+20.2
1950	50,621	5,083	2,103
Percent Change	+10.9	+9.7	+33.4
1960	48,973	6,019	2,323
Percent Change	-3.3	+18.4	+10.5
1970	46,937	5,460	2,213
Percent Change	-4.2	-9.3	-4.7

SOURCE: United States Bureau of the Census.

TABLE 3

GENERAL POPULATION CHARACTERISTICS OF CHADBOURN AND CHADBOURN TOWNSHIP
BY AGE AND SEX, 1960 - 1970

AGE IN YEARS	CHADBOURN						CHADBOURN TOWNSHIP					
	1960			1970			1960			1970		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Under 5	125	165	290	103	84	187	330	386	716	248	196	444
5-14	257	288	545	219	256	475	757	755	1,512	587	623	1,210
15-24	146	167	313	191	204	395	440	463	903	488	489	977
25-34	138	155	293	103	130	233	301	372	673	283	320	603
35-44	114	134	248	122	138	260	331	383	714	286	359	645
45-54	123	156	279	105	123	228	314	359	673	295	325	620
55-64	72	94	166	79	127	206	190	207	397	228	278	506
65+	79	110	189	92	137	229	193	238	431	194	261	455
All Ages	1,054	1,269	2,323	1,014	1,199	2,213	2,856	3,163	6,019	2,609	2,851	5,460
MEDIAN AGE (MALE & FEMALE)	NA ¹			27.0			NA			26.5		

¹NA - Information Not Available.

SOURCE: U. S. Bureau of the Census, General Population Characteristics, Pc(1)-35B, (Washington, 1960).

U. S. Bureau of the Census, First Count Information Tape, unpublished data, 1970.

U. S. Bureau of the Census, General Population Characteristics, Pc(1)-B35, (Washington, 1970).

population.² Since the expansion ratio of .900 is near 1.000 and the total town population has declined, some out-migration has occurred.

In view of the fluctuating population history of Columbus County, Chadbourn Township and Chadbourn, it becomes difficult to make population projections with accuracy. Furthermore, all three political entities are subject to natural disasters and economic changes which could alter population projections. In addition, population projections cannot account for any annexations that might occur, thus expanding Chadbourn's corporate limits and increasing the town's population. Therefore, because of considerable uncertainty, it is necessary to provide a population projection range which includes high, medium, and low figures. These figures are derived by using various projection techniques which analyze past trends and project them into the future. The results of these techniques as applied to Columbus County, Chadbourn Township, and Chadbourn, are presented in Table 4.

Population Composition

The composition of the population living in the planning area may be determined by observing age, race, and sex characteristics for the Town of Chadbourn and Chadbourn Township. In both the town and township, there is a rather equal distribution of males and females under age 5 through age 54, which would indicate a family oriented planning area. From age 55 to 65 years of age and over, the balance becomes weighted by more females (Table 3). The higher number of elderly females in this age range is representative of the national trend of females having a longer life expectancy.

Between 1960 and 1970, most age groups in the town and township declined in population (Table 5). Much of this population reduction may be attributed to a declining birth rate and out-migration. The most notable exceptions to this general population decline are the increases in the number of people ages 15 to 24 and 55 to 65 years of age and over in both the town and township and the increase in the number of people ages 35 to 44 in the town. The increases in the younger age groups may be partially explained by the introduction of the Crown Knitwear Manufacturing Company in 1967. Increases in the age range of 55 to 65 years of age and over may be explained by the fact that elderly people are less prone to out-migrate and many will often return home to their place of birth for retirement.

Racially, there is a higher percentage of white residents in the town and township than nonwhites and the nonwhite population tends to out-migrate more rapidly than the white population (Table 6). The more rapid out-migration of nonwhite residents in Chadbourn continues a trend that was evident between the

²U. S. Bureau of the Census, State of North Carolina, Social Indicators, 1970.

TABLE 4
POPULATION PROJECTIONS, 1980 - 2000
COLUMBUS COUNTY, CHADBOURN TOWNSHIP, AND CHADBOURN

COLUMBUS COUNTY ^a			
	YEAR		
	1980	1990	2000
High	49,000	50,000	52,000
Medium	47,000	46,000	45,000
Low	45,000	42,000	38,000

CHADBOURN TOWNSHIP ^a			
	YEAR		
	1980	1990	2000
High	6,226	6,689	7,305
Medium	5,972	6,154	6,322
Low	5,718	5,619	5,339

CHADBOURN ^b			
	YEAR		
	1980	1990	2000
High ¹	2,587	2,800	3,013
Medium ²	2,430	2,668	2,930
Low ³	2,424	2,636	2,848

¹Least Squares Projection Method. This method uses regression analysis to compute a line "best fitting" the past population data of a given area and to yield an extrapolated population projection.

²Percentage Increase Method. This method asserts that an average percentage change over a period of years is the best indicator of the future trend in population.

³Arithmetic Projection Method. This method asserts that a given absolute numerical change in a population from one point in time to another as exhibited in the past is the best means of extrapolating a future population trend.

SOURCE: ^aOffice of State Planning, Raleigh, 1975.

^bDivision of Community Assistance, Fayetteville, 1975.

TABLE 5
POPULATION CHANGE
CHADBOURN AND CHADBOURN TOWNSHIP, 1960 and 1970

AGE IN YEARS	CHADBOURN			CHADBOURN TOWNSHIP		
	1960	1970	PERCENT CHANGE	1960	1970	PERCENT CHANGE
Under 5	290	187	-35.5	716	444	-38.0
5-14	545	475	-12.8	1,512	1,210	-20.0
15-24	313	395	+26.2	903	977	+8.2
25-34	293	233	-20.5	673	603	-10.4
35-44	248	260	+4.8	714	645	-9.7
45-54	279	228	-18.3	673	620	-7.9
55-64	166	206	+24.1	397	506	+27.5
65+	189	229	+21.2	431	455	+5.6
All Ages	2,323	2,213	-4.7	6,019	5,460	-9.3

SOURCE: United States Bureau of the Census, General Population Characteristics, Pc(1)-35B, (Washington, 1960).

United States Bureau of the Census, First Count Information Tape, unpublished data, 1970.

TABLE 6

TOTAL COUNT OF PERSONS BY RACE
CHADBOURN AND CHADBOURN TOWNSHIP, 1960 and 1970

RACE	CHADBOURN				PERCENT CHANGE 1960-1970	CHADBOURN TOWNSHIP				PERCENT CHANGE 1960-1970
	1960	PERCENT OF TOTAL	1970	PERCENT OF TOTAL		1960	PERCENT OF TOTAL	1970	PERCENT OF TOTAL	
White	1,407	60.6	1,404	63.4	-.2	3,810	63.3	3,774	69.1	-.9
Negro	902	38.8	765	34.6	-15.2	2,044	34.0	1,546	28.3	-24.4
Other	14	.6	44	2.0	+214.3	165	2.7	140	2.6	-15.2
Total	2,323	100.0	2,213	100.0	-4.7	6,019	100.0	5,460	100.0	-9.3

SOURCE: United States Bureau of the Census, General Population Characteristics, Pc(1)-35B, (Washington, 1960).

United States Bureau of the Census, General Population Characteristics, Pc(1)-B35, (Washington, 1970).

years 1950 and 1960.³ An exception to the rapid nonwhite out-migration trend is the sizeable percentage increase in the number of "other" residents in Chadbourn between the years 1960 and 1970.

ECONOMY

Commuting Patterns

When analyzing the economy of a small town, it becomes necessary to look at economic data for the county, since most rural areas of the southeast depend on commuting as a way of life. Shopping and employment are often several miles from an individual's place of residence.

Table 7 provides a comparison of 1960 and 1970 commuting patterns for Columbus County. Between 1960 and 1970, out-commuting in the county increased substantially. An implication of this information could be that the county does not have enough jobs to meet employment needs, thus forcing residents to seek employment across county and state lines. In some instances, however, there may be enough jobs, but higher salaries and good highways make places like New Hanover County and Wilmington economically attractive and more accessible. Commuting can thus become a tolerable inconvenience.

Labor Force

On a county-wide basis, Columbus County's labor force has increased modestly from 1970 through 1973 (Table 8). Of this total labor force, manufacturing related jobs have demonstrated a continual increase, while agricultural related jobs have demonstrated a decrease. The year 1972 is the only exception to the continuous decline of the agricultural labor force.

The decline in agricultural employment may be attributed to the continual reduction in the number of farms (Table 9). Farm mechanization and improvements in methods of crop production have also affected agricultural employment. Consequently, many farm laborers and small-scale farm operations have become things of the past. In Columbus County average farm size increased from 20 acres in 1959 to 76 acres in 1969 and the number of farm tenants decreased from 1,214 in 1959 to 365 in 1969 (Table 9). Further evidence of the changes in agricultural employment can be seen in the unemployment rate of the county, as this rate has been consistently higher than the state as a whole (Table 8).

³William A. Collier, Jr., Population and Economy, Chadbourn, North Carolina, State of North Carolina, Department of Conservation and Development, Division of Community Planning, November, 1965, page 9.

TABLE 7
COMMUTING PATTERNS FOR COLUMBUS COUNTY
1960 and 1970

COUNTY	1960		1970	
	OUT- COMMUTING	IN- COMMUTING	OUT- COMMUTING	IN- COMMUTING
Bladen	95	206	246	391
Brunswick	71	140	165	265
Cumberland	16	--	134	--
(Fayetteville)	(--)	(--)	(64)	(--)
Hoke	8	--	0	0
New Hanover	210	277	823	194
(Wilmington)	(--)	(--)	(646)	--
Pender	--	8	0	9
Robeson	88	53	253	106
Sampson	4	--	9	--
Scotland	0	0	16	0
Dillon (South Carolina)	--	12	7	14
Florence (South Carolina)	0	0	15	--
Georgetown (South Carolina)	0	0	12	--
Horry (South Carolina)	134	156	385	423
Marion (South Carolina)	16	20	45	17
Elsewhere	244	129	375	194
TOTAL COMMUTERS	886	1,001	2,485	1,613
Number of People Living and Working in Columbus County	14,419		13,423	
Number of Employed Residents	15,305		15,908	
Number of Persons Working in Columbus County	15,420		15,036	
Net Commuting Gain (+) or Loss (-)	+115		-872	

SOURCE: Employment Security Commission of North Carolina, North Carolina Commuting Patterns, 1960 and 1970, Raleigh, (March, 1970).

TABLE 8
ANNUAL AVERAGE LABOR FORCE ESTIMATES,¹
COLUMBUS COUNTY AND THE STATE OF NORTH CAROLINA,
1970 and 1973

	1970		1971		1972		1973	
	COUNTY	STATE	COUNTY	STATE	COUNTY	STATE	COUNTY	STATE
Civilian Labor Force ²	19,460	2,184,000	20,220	2,222,000	20,470	2,321,000	20,610	2,387,000
Total Unemployment	1,000	94,000	1,190	106,000	1,180	93,000	890	83,000
Rate of Unemployment	5.1	4.3	5.9	4.8	5.8	4.0	4.3	3.5
Total Employment	18,460	2,090,000	19,030	2,116,000	19,290	2,228,000	19,720	2,304,000
Agricultural Employment	4,070	134,000	3,730	123,000	3,920	127,800	3,880	128,400
Nonagricultural Wage & Salary Employment	12,100	1,718,000	12,850	1,748,800	12,980	1,850,200	13,460	1,925,700
All Other Nonagricul- tural Employment ³	2,290	237,400	2,450	243,800	2,390	250,000	2,380	249,900

¹These figures do not include commuters in the labor force.

²Data is based on place of residence.

³Includes nonagricultural self-employed workers, unpaid family workers, and domestic workers in private households.

SOURCE: Employment Security Commission of North Carolina, Bureau of Employment Security Research, North Carolina Labor Force Estimates, Raleigh, (November, 1974).

TABLE 9
SELECTED AGRICULTURAL STATISTICS
COLUMBUS COUNTY, 1959 and 1969

	1959	1969	PERCENT CHANGE
Number of Farms	4,819	3,174	-34.2
Average Farm Size (Acres)	20	76	+280.0
Value of Land and Buildings	\$14,797	\$28,916	+95.4
Farm Ownership:			
Full Time	2,546	1,922	-24.5
Part Time	1,054	888	-15.7
Tenants	1,214	365	-70.6

SOURCE: United States Bureau of the Census, Census of Agriculture, 1969, Volume 1, Area Reports, Part 26, North Carolina, Section 1 Summary Data, (Washington, D.C., 1972).

The county's unemployment rate may also be explained by a lack of adequate employment opportunities in nonagricultural job areas. Although nonagricultural related jobs increased steadily between 1970 and 1973, the county's unemployment rate remained high compared to the state as a whole. What all this seems to indicate is a county which needs to provide more employment opportunities to help decrease unemployment. The problem is compounded, as this must be done on a scale that will compensate for the continuous decline in agricultural related jobs.

For the future, Columbus County's agricultural job opportunities will probably continue to decline until a stabilization point is reached where only large mechanized farms with a minimum labor need are in existence. To meet this decline in agricultural jobs and provide expanded job opportunities, Columbus County will have to attract manufacturing firms which are diverse in nature. This should create new employment opportunities and help prevent a reliance on a one or two product oriented economy, where reduced consumer demand of these products could lead to economic stagnation.

With a slightly higher unemployment rate, there is a sizeable pool of recruitable workers residing within the Chadbourn recruiting area. This area is defined by the Employment Security Commission of North Carolina as that area which covers a radius of approximately 25 road miles or approximately 30 to 40 minutes driving time from Chadbourn. This area includes portions of Bladen, Brunswick, Columbus, and Robeson Counties and a portion of South Carolina.⁴ According to 1970 Census data, 103,945 persons reside within this radius. Of this total, 18,390 persons reside in South Carolina.⁵ In July, 1975, the Employment Security Commission estimated that there were nearly 4,500 recruitable workers within the above areas.⁶ These workers are classified by work experience as well as occupational class and sex (Tables 10 and 11).

Dollar Volume Sales

For dollar volume sales, information is again available only on a county basis. As noted in Table 12, Columbus County has experienced a steady growth rate over the past decade in total retail sales, as Columbus County's share of the total state retail sales is remaining constant.

⁴Employment Security Commission of North Carolina, "Report on Active Job Applicants Registered for Work with Employment Security Offices and Residing in the Area of Chadbourn", Raleigh, July 3, 1975, page 1.

⁵Ibid.

⁶It should be noted that in actuality the figures could be even higher than those reported as they include only those people who registered for jobs with Employment Security Offices and do not include all potential workers in the area. This data is also subject to change every six months as new data becomes available.

TABLE 10
NUMBER OF REGISTERED JOB APPLICANTS RESIDING WITHIN THE CHADBOURN AREA
PREPARED FROM JULY, 1975 DATA

MILES	PERSONS REGISTERED			WITH SUBSTANTIAL WORK EXPERIENCE		WITH LIMITED OR NO WORK EXPERIENCE	
	TOTAL	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
0-15	1,730	990	740	975	710	15	30
15-20	915	495	420	485	390	10	30
20-25	1,795	970	825	940	760	30	65
TOTAL	4,440	2,455	1,985	2,400	1,860	55	125

NOTE: These estimates refer only to the North Carolina portion of the defined area. Additional workers may be recruitable in South Carolina.

SOURCE: Employment Security Commission of North Carolina, "Report on Active Job Applicants Registered for Work with Employment Security Offices and Residing in the Area of Chadbourn", Raleigh, (July, 1975).

TABLE 11
MAJOR OCCUPATIONAL CLASS OF JOB APPLICANTS RESIDING WITHIN THE CHADBOURN AREA
PREPARED FROM JULY, 1975 DATA

	TOTAL	PROFESSIONAL TECHNICAL, AND MANAGERIAL	CLERICAL AND SALES	SERVICE	FARMING, FISHING, AND FORESTRY	PROCESSING
Male	2,455	105	140	110	70	85
Female	1,985	55	330	205	65	55
TOTAL	4,440	160	470	315	135	140

	MACHINE TRADES	BENCH WORK	STRUCTURAL WORK	MISCELLANEOUS OCCUPATIONS	PARTIALS
Male	275	105	815	465	285
Female	195	590	20	100	370
TOTAL	470	695	835	565	655

NOTE: These estimates refer only to the North Carolina portion of the defined area. Additional workers may be recruitable in South Carolina.

SOURCE: Employment Security Commission of North Carolina, "Report on Active Job Applicants Registered for Work with Employment Security Offices and Residing in the Area of Chadbourn", Raleigh, (July, 1975).

TABLE 12
GROSS RETAIL SALES, COLUMBUS COUNTY, 1963 - 1973

<u>YEAR</u>	<u>COUNTY GROSS RETAIL SALES (000's of \$)</u>	<u>PERCENT OF TOTAL STATE RETAIL SALES</u>
1973	127,267	.7
1972	109,997	.7
1971	94,802	.7
1970	83,886	.7
1969	78,138	.7
1968	75,868	.7
1967	71,112	.7
1966	68,691	.8
1965	62,402	.7
1964	58,127	.8
1963	57,573	.8

SOURCE: North Carolina Department of Revenue,
"Analysis of Sales and Use Tax
Collections and Gross Retail Sales by
Counties and Business Groups".

Local Economy

In addition to the important role played by agriculture in the local economy, Chadbourn has several other important economic activities. A January, 1975 survey indicated a total of 230 workers involved in four industries; Chadbourn Veneer, Crown Knitwear, Dixie Grain and Feed, and Jones Peanut Company.⁷ To supplement this information, Table 13 indicates that 378 people or 46.2 percent of the town's total employed population who are 14 years of age or older are involved in manufacturing and wholesale and retail trade operations.

Family Income

Overall, family income levels for residents of Chadbourn is lower than the incomes of families in Columbus County and the state as a whole, as 63.8 percent of all families in Chadbourn earn less than \$7000.00 per year, compared to 59.2 percent for the county and 44.0 percent for the state (Table 14). In comparing median, mean, and per capita incomes, Columbus County residents earn less than state residents as a whole. Although these figures are not available for Chadbourn, they would closely resemble or be slightly lower than county figures.

Education

The educational attainment of Chadbourn residents is quite low with 66.8% of the town's population, who are 25 years of age and over, having achieved less than a high school education. However, this is quite similar to state and county percentages (Table 15).

UTILITIES

Water System

Chadbourn's water storage system consist of one elevated storage tank with a capacity of 60,000 gallons. The water is not treated when it is distributed through a system that is partly looped. Three wells producing from 250-420 gallons per minute aid in distribution. Maximum daily capacity of the water system is 1,440,000 gallons per day (GPD). To date, the maximum peak load has been 150,000 GPD, leaving 1,290,000 GPD available above the peak load.

Currently, most sections of town are served by the public water system. A line also extends outside of the corporate limits along N.C. 130 and serves South-eastern Community College and the Georgia Pacific Company. Future planned water

⁷North Carolina Department of Natural and Economic Resources, "County and Community Data Sheets", Wilmington, (January 31, 1975).

TABLE 13
COUNT OF EMPLOYED PERSONS 14 AND OLDER
BY INDUSTRY, CHADBURN, 1970

INDUSTRY	NUMBER OF WORKERS	PERCENT OF TOTAL
Construction	31	3.8
Manufacturing	188	23.0
Durable Goods	70	8.6
Transportation	5	.6
Communications, Utilities, Sanitary Services	26	3.2
Wholesale and Retail	190	23.2
Finance, Insurance, Business Repairs	68	8.3
Other Professional Services	46	5.6
Public Administration	22	2.7
Educational Services	58	7.1
Other Industries	112	13.7
Total Employed Population 14 Years or Older	816	100.0

SOURCE: United States Bureau of the Census, Fifth Count Information Tape, unpublished data, 1970.

TABLE 14
FAMILY INCOME LEVELS
STATE OF NORTH CAROLINA, COLUMBUS COUNTY, AND CHADBOURN, 1970

INCOME BRACKETS	STATE OF NORTH CAROLINA		COLUMBUS COUNTY		CHADBOURN	
	NUMBER OF FAMILIES	% OF TOTAL	NUMBER OF FAMILIES	% OF TOTAL	NUMBER OF FAMILIES	% OF TOTAL
Less than \$1,000	44,260	3.4	788	6.8	54	10.4
\$1,000 - \$2,999	144,068	11.1	2,154	18.5	80	15.4
\$3,000 - \$4,999	176,449	13.7	2,060	17.7	61	11.7
\$5,000 - \$6,999	203,951	15.8	1,892	16.2	137	26.3
\$7,000 - \$8,999	198,639	15.4	1,713	14.7	81	15.6
\$9,000 - \$9,999	88,761	6.9	598	5.1	25	4.8
\$10,000 - \$14,999	287,385	22.2	1,684	14.5	52	10.0
\$15,000 - \$24,999	116,154	9.0	583	5.0	25	4.8
\$25,000 - \$49,999	26,430	2.0	124	1.1	5	1.0
\$50,000 and Above	6,369	.5	49	.4	--	---
TOTAL FAMILIES	1,292,466	100.0	11,645	100.0	520	100.0
MEDIAN INCOME	\$7,774		\$5,846		NA ¹	
MEAN INCOME	\$8,872		\$6,906		NA	
PER CAPITA INCOME OF PERSONS	\$2,492		\$1,823		NA	
PERCENT OF PERSONS BELOW THE POVERTY LEVEL	20.3		33.3		26.2	

¹ NA - Information Not Available

SOURCE: U. S. Bureau of the Census, General Social and Economic Characteristics, PC (1)-C35, (Washington, 1970).
U. S. Bureau of the Census, Fifth Count Information Tape, unpublished data, 1970.

TABLE 15

YEARS OF SCHOOL COMPLETED, PERSONS 25 YEARS OLD AND OVER
CHADBOURN, COLUMBUS COUNTY, STATE OF NORTH CAROLINA, 1970

YEARS OF SCHOOL COMPLETED	CHADBOURN	COLUMBUS COUNTY	STATE OF NORTH CAROLINA
Persons 25 years and over	1,018	24,244	2,646,272
No school years completed	50	556	51,799
Elementary: 1-7	362	8,040	698,067
8	95	2,416	233,367
High School: 1-3	172	6,041	645,089
4	207	4,475	572,928
College: 1-3	57	1,563	221,396
4+	75	1,153	223,626
Median School Years	NA ¹	9.5	10.5

PERCENTAGE DISTRIBUTION		
Persons 25 and over	100.0	100.0
No school years completed	5.0	2.0
Elementary: 1-7	35.6	26.4
8	9.3	8.8
High School: 1-3	16.9	24.4
4	20.3	21.7
College: 1-3	5.6	8.4
4+	7.4	8.6

¹NA - Information Not Available

SOURCE: U. S. Bureau of the Census, General Social and Economic Characteristics, Pc(1)-C35, (Washington, 1970).
U. S. Bureau of the Census, Fifth Count Information Tape, unpublished data, 1970.

improvements include storage expansion, line extensions, and upgrading undersized lines. A feasibility study for public water services has also been completed for Central Columbus County.⁸ The current service area and proposed improvements in Chadbourn are shown in Figure 5.

Sewer System

Chadbourn's present wastewater treatment system is designed for secondary waste treatment. The treatment plant was constructed in 1971 and has a maximum capacity of 500,000 gallons per day (GPD). To date, the maximum peak load has been 380,000 GPD, leaving 120,000 GPD available above peak load. Collector lines are 6" to 8" in size with outfall lines ranging from 12" to 18" in size. Future planned sewer system improvements include 201 Facilities Planning. A wastewater feasibility study has also been completed for Central Columbus County.

Most of the town is served by the public sewer system. An outfall line of 18" also extends outside the corporate limits and serves the Georgia Pacific Company. The current service area is shown in Figure 6.

Natural Gas

There are no natural gas companies in Chadbourn.

Electric Power and Telephone Services

Electric power is provided by Carolina Power and Light Company. Telephone Service is provided by Carolina Telephone and Telegraph Company. Both of these services would have no affect on land utilization, as they can be provided rather easily.

Storm Drainage

When urban development occurs, storm drainage problems increase, since the amount of storm water runoff increases as the amount of impervious surfaces (streets, roofs, parking lots) increases. Thus, the most important consideration in regard to land use planning and storm drainage is that a proper drainage system is necessary to remove storm water. This will help prevent flooding and subsequent property drainage.

⁸ Moore, Gardner & Associates, Inc., Feasibility Study On Water and Wastewater Facilities For Central Columbus County, Greensboro, North Carolina, June 1975.

⁹ Ibid.

WATER SYSTEM

CURRENT SERVICE AREA AND
PROPOSED IMPROVEMENTS

LEGEND

Existing Current Service Area

Existing Wells

Existing Elevation Tank -- 60,000 GAL.

Existing Elevation Tank -- 300,000 GAL.

Proposed Improvements

CHADBOURN

NORTH CAROLINA








Scale 1" = 1/2 Mile

WATER SYSTEM

CURRENT SERVICE AREA AND
PROPOSED IMPROVEMENTS

LEGEND

-  Current Service Area
-  Existing Wells
-  Existing Elevated Tank -- 60,000 Gal.
-  Proposed Elevated Tank -- 300,000 Gal.
-  Proposed Line Improvements

CHADBOURN
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Figure 5

SEWER SYSTEM CURRENT SERVICE AREA



LEGEND

- Existing Service Area
- Lift Station
- Treatment Plant

CHADBOURN
NORTH CAROLINA



THE INFORMATION ON THIS MAP WAS OBTAINED FROM THE CHADBOURN SEWER SYSTEM STUDY REPORT, PREPARED BY THE CHADBOURN SEWER SYSTEM STUDY COMMITTEE, AND THE CHADBOURN SEWER SYSTEM STUDY REPORT, PREPARED BY THE CHADBOURN SEWER SYSTEM STUDY COMMITTEE, AND THE CHADBOURN SEWER SYSTEM STUDY REPORT, PREPARED BY THE CHADBOURN SEWER SYSTEM STUDY COMMITTEE.

Figure 6

Chadbourn is drained by a system of storm sewers of varying sizes (18" to 36") and by a series of natural ditches. High water tables and nearly flat topography present problems to this system, as water backs-up into low-lying areas during heavy rainfalls. Since all drainage eventually flows through the ditches, urban land uses should not impede the flow of water in these ditches or consume vacant land lying too close to these channels.

EXISTING LAND USE ANALYSIS

This section discusses the distribution of general land use - residential, commercial, industrial, social and cultural, undeveloped and vacant, and transportation - in the Chadbourn Planning Area and identifies major changes which have occurred since the 1966 plan. The updated land use pattern, as of July, 1975 is graphically portrayed as Figure 7.

Residential Land Use

Within the corporate limits of Chadbourn, there has been very little change in the residential use of land or the residential growth pattern since 1966. The largest residential area is located north of Railroad Avenue and east of Wilson Street, where single family homes on relatively large lots prevail. It is in this area where the greatest amount of residential growth has also occurred, as represented by the Pinecrest Subdivision. The second largest concentration of residential units is located south of Railroad Avenue and west of the Seaboard Coastline Railroad. This area is characterized as being almost entirely nonwhite with small substandard housing on small lots. The third largest concentration of housing is located south of Kirkland Street and east of the Seaboard Coastline Railroad where single family units on relatively large lots prevail. The most significant change in this area has been the introduction of a mobile home park adjacent to Institute, Mills, and Smith Streets. The final residential area is located west of Wilson Street and north of the Seaboard Coastline Railroad. This area is generally characterized by small housing units, small lots, and an intermingling of residential units with commercial and industrial land uses. The most significant change in this area has been the introduction of a mobile home park adjacent to the railroad and north of Chappin Street.

In the one-mile fringe area, residential development continues along N.C. 410, south of the corporate limits. Practically all of the houses in this area are close to the highway right-of-way and many are in a dilapidated or deteriorating condition. Residential development along other major traffic arteries in the fringe area remains scattered with very little change since 1966.

Within the corporate limits, an idea of existing housing conditions may be obtained from Table 16. A significant point which emerges from this information is the high percentage of total housing units (23.2%) and black occupied housing units (62.9%) which are lacking some or all plumbing facilities. Although these figures are similar to county figures, they are considerably higher than the state as a whole. Another important point emerging from the data is the fact that most of the housing units in Chadbourn are single family type structures, as 82.6% of the total housing units are in one-unit structures.

EXISTING LAND USE

July, 1972

Unimproved or Forest Land

CHADBOURN


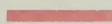
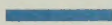
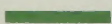
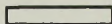
NORTH CAROLINA

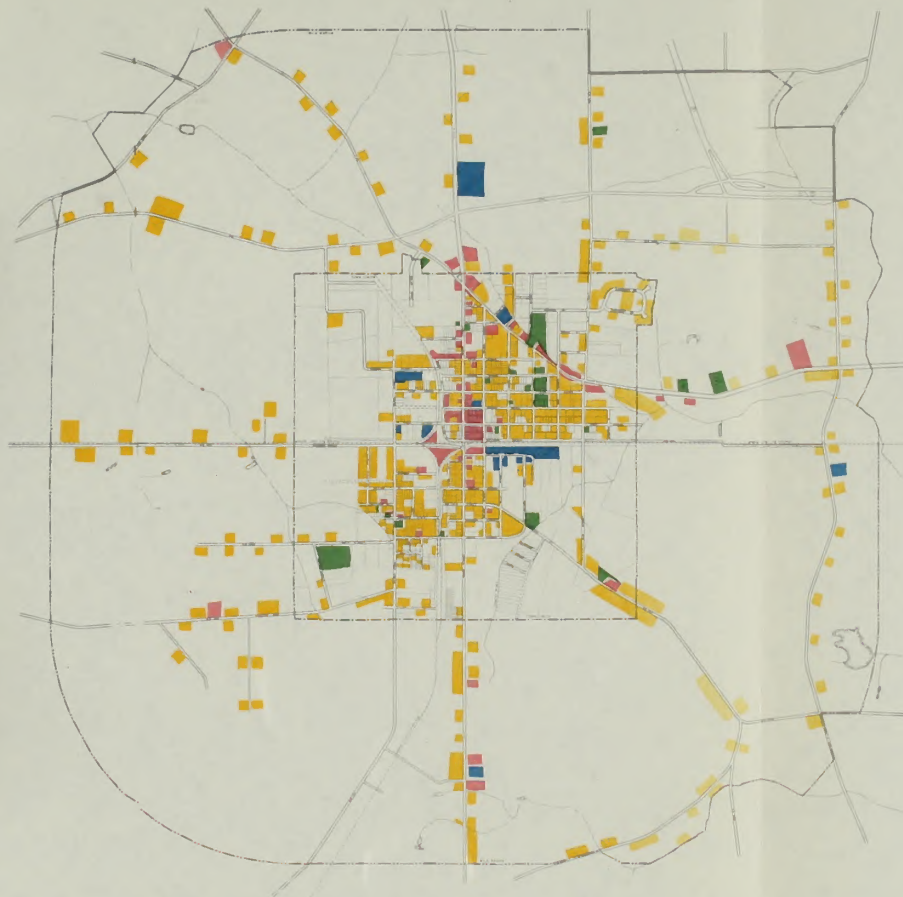


EXISTING LAND USE

July, 1975

LEGEND

-  Residential
-  Commercial
-  Industrial
-  Social & Cultural
-  Undeveloped or Vacant Land



CHADBOURN
NORTH CAROLINA



Figure 7

TABLE 16
COMPARISON OF SELECTED HOUSING CHARACTERISTICS
CHADBOURN, COLUMBUS COUNTY, STATE OF NORTH CAROLINA, 1970

	Chadbourn	Columbus County	State of North Carolina
Total Housing Units	764	14,973	1,641,222
Total White Occupied Housing Units	434	9,936	1,220,681
Total Black Occupied Housing Units	210	3,357	277,237
Percent Owner Occupied	61.5	69.4	65.4
-%White Owner Occupied	66.1	77.5	86.6
-% Black Owner Occupied	27.8	20.7	12.8
Percent Renter Occupied	38.5	30.6	34.6
-% White Renter Occupied	57.5	65.0	69.9
-% Black Renter Occupied	34.6	35.5	28.9
Vacancy Rate	9.5	8.7	6.8
Percent in One-Unit Structures	82.6	88.8	82.9
Percent of Total Housing Units Lacking Some or All Plumbing Facilities	23.2	27.0	15.6
Percent of Black Occupied Housing Units Lacking Some or All Plumbing Facilities	62.9	61.4	38.6
Percent With 1.01 or More Persons Per Room (Occupied Units)	10.6	12.8	10.2
Percent With 1.01 or More Persons Per Room (Black Occupied Units)	22.4	26.2	25.0
Medium Number of Rooms			
- Owner Occupied	5.6	5.5	5.4
- Renter Occupied	4.5	4.7	4.3
Medium Number of Rooms (Black Occupied Units)			
-Owner Occupied	5.5	5.6	5.2
- Renter Occupied	4.3	4.4	4.2
Median Value	\$8,000	\$8,600	\$12,800
-Owner Occupied Units	\$8,000	\$8,600	\$12,800
- Black Owner Occupied Units	\$5,000	\$5,000	\$8,000

TABLE 16 (Continued)
COMPARISON OF SELECTED HOUSING CHARACTERISTICS
CHADBOURN, COLUMBUS COUNTY, STATE OF NORTH CAROLINA, 1970

	Chadbourn	Columbus County	State of North Carolina
Median Contract Rent	\$38	\$41	\$59
Median Contract Rent of Black Rental Units	\$30	\$30	\$44
Percent of Year-Round Housing Units Built, 1939 or Earlier	33.0	33.6	31.6

SOURCE: U. S. Bureau of the Census, Detailed Housing Characteristics, HC(1)-B35, (Washington, 1970).

U. S. Bureau of the Census, General Housing Characteristics, HC(1)-A35, (Washington, 1970).

Commercial Land Use

Commercial land use is concentrated in three sections of the Chadbourn Planning Area. The Central Business District (CBD), north of the CBD along Brown Street, and along N.C. 130. The CBD is in a deteriorating condition, with the number of vacant stores increasing and appearance degenerating. Stores along Railroad Avenue are in the poorest condition. Along Brown Street a variety of commercial activities are developing, which may almost be consider an extension of the present CBD. Along N.C. 130, strip commecialism continues both inside the corporate limits and in the fringe area east of town, where two car sales businesses, a drive-in theater, a tire store, and a small food drive-in have been the most significant commercial additions since 1966.

Industrial Land Use

Except for several tobacco warehouses and junkyards, industrial operations are confined to three large sections of the planning area. Industrial related activities may be found along the Seaboard Coastline Railroad within the corporate limits, at the intersection of Wilkes and Chappin Street, and north of U.S. 76. The most significant change in industrial land utilization has been the purchase and destruction of a tobbaeco warehouse across from the Town Hall. This land will be used for the construction of a new Town Hall.

Social and Cultural Land Use

Social and cultural land uses in the Chadbourn Planning Area include schools, athletic fields, churches, cemeteries, a park, and various institutional uses, such as the Town Hall and fraternal organizations. Social and cultural land uses are scattered throughout the planning area and are located conveniently to the town's population. A significant change has been the development of the community park adjacent to Miller Street. Presently, the facilities at the park are limited to several lighted ballfields and an unpaved parking area.

Undeveloped or Vacant Land and Open Space

Much of the Chadbourn Planning Area consists of large amounts of vacant and undeveloped land. These lands include farms, woodland, unused lots, swamps, streams, and sizeable bodies of water.

Within the corporate limits, the largest parcels of vacant land exist in the northwest, southwest, and southeast sections. These areas are almost totally devoted to woodland and farming. In the developed sections of town, several large parcels of land exist. One very noticeable piece of property is located to the rear of the Chadbourn Shopping Center between Brown and Wilson Streets, north of Fifth Avenue. This land is surrounded entirely by urban land uses.

Transportation

With few exceptions, Chadbourn has a gridiron street system where straight streets intersect each other at 90 degree intersections to form regular blocks. While this pattern of street design was popular at the turn of the century, it is comparatively inefficient in its requirements for more land, pavement, and length of utility lines in comparison to layouts which feature curved streets with larger blocks and cluster developments.

The major streets in Chadbourn's system are Brown Street (N.C. 410) running north-south, Institute Street (S.R. 1317) and N.C. 130, running east-west. The most significant change in the transportation network of the planning area has been the completion of the new U.S. 74 and U.S. 76, which bypasses Chadbourn north of the corporate limits. This new route should relieve much of the traffic congestion in Chadbourn as east-west thru traffic can now bypass busy sections of town.

The Street System Map, represented as Figure 8, shows the location of town and state maintained streets and roads in the corporate limits of Chadbourn. Within the corporate limits, there are 21.9 miles of streets. Of this total, 6.2 miles are maintained by the state and 15.7 miles are maintained by the town. Of the total town maintained streets, 4.4 miles are unpaved. Most of these unpaved streets are in the southern part of town in blighted residential areas. Practically all of the state maintained highways are paved with the exception of S.R. 1425 (Railroad Avenue) east of Elm Street and S.R. 1421 (Wilkes Street Extension) south of the corporate limits.

Aside from highways, the only other major transportation system in Chadbourn is the Seaboard Coastline Railroad. This system offers good connections to points east, west, and south. However, service is limited to freight shipments.

STREET SYSTEM MAP

The following map shows the location of the proposed street system and the location of the existing street system. The map is a plan view of the street system and shows the location of the proposed street system and the location of the existing street system. The map is a plan view of the street system and shows the location of the proposed street system and the location of the existing street system.

Goal: Encourage quality development.

Objectives:

1. The street system plan and zoning plan shall be consistent.
2. The street system plan shall be consistent with the zoning plan.
3. The street system plan shall be consistent with the zoning plan.
4. The street system plan shall be consistent with the zoning plan.
5. The street system plan shall be consistent with the zoning plan.
6. The street system plan shall be consistent with the zoning plan.

Goal: Encourage quality development.

Objectives:

1. The street system plan shall be consistent with the zoning plan.
2. The street system plan shall be consistent with the zoning plan.

CHADBOURN
NORTH CAROLINA



STREET SYSTEM MAP

LEGEND

- State Maintained
- Town Maintained (Paved)
- Town Maintained (Unpaved)



CHADBURN
NORTH CAROLINA



Figure 8

GOALS AND OBJECTIVES

The following set of goals and the objectives necessary to achieve these goals have been established in an effort to insure the utilization of sound judgement and consistency in the preparation and implementation of this land use plan. Moreover, these goals and objectives can assist elected and appointed town officials and private citizens in making logical policy decisions in guiding present and future development in the planning area. Adherence to these goals and objectives should help achieve an attractive and desirable living environment.

Goal: Encourage orderly and systematic community development.

Objectives:

1. The town board, planning board, and citizens should utilize this land use plan and subsequent implementation measures as a guide for making land use policy decisions.
2. The town board and planning board should obtain the involvement of planning area residents in the planning and implementation processes through actively encouraging participation at scheduled meetings.
3. Exercise careful planning for development of the one-mile fringe area and limit urban development to those areas where services and facilities can or will be available and which can feasibly be incorporated into the town if desired.
4. Plan the extension or improvement of appropriate sized utility lines in areas where development is desired and limit utility services in those areas intended for low-density development.
5. Where and when possible, existing vacant land areas within the corporate limits should be developed before those in the fringe areas.
6. Adjoining land uses should be compatible. Where necessary, buffers (i.e. fences, trees, shrubs, hedges, and open space) should be provided to reduce the possibility of one use having an adverse effect on adjoining uses.

Goal: Preserve and improve the physical environment.

Objectives:

1. Achieve maximum protection and use of flood plains and stream banks for open space conservation, recreation, or farming.
2. Encourage environmental protection by preventing soil erosion.

3. Develop a program to achieve high water quality by insuring such things as the adequate treatment of wastewater.
4. Promote an attractive community appearance by improving visual attractiveness throughout the community.
5. Encourage adequate storm drainage.
6. Encourage the elimination of private wells and septic tanks in high density areas where public water and sewer services are available.
7. Monitor all sources of possible air pollution.
8. Encourage subdivision and site plans and construction practices which minimize disturbance of natural terrain and plant cover.

Goal: Provide a decent home and living environment for all residents of the planning area.

Objectives:

1. Maintain high living and building standards of present residential areas exhibiting such characteristics.
2. Encourage the location of housing in areas which can be served to the maximum extent possible by public utilities.
3. Encourage strict enforcement of building codes and the zoning and subdivision regulations.
4. Encourage improvement of living standards in blighted neighborhoods.
5. Protect existing established neighborhoods from intrusions of incompatible uses.
6. Encourage the development of housing in varying density type and cost to meet the needs of all income levels and age groups.

Goal: Provide for a variety of commercial activities grouped in convenient and suitable locations which are compatible with neighboring developments to serve consumer needs.

Objectives:

1. Encourage development of well-planned neighborhood shopping areas. Emphasis should be placed on providing ample on-site parking, limiting traffic congestion on adjoining streets, discouraging strip commercial development, and limiting access points along busy thoroughfares.
2. Encourage the revitalization of Chadbourn's Central Business District through joint public and private programs. Emphasis should be placed on rehabilitation of buildings, new construction, beautification, parking, and traffic and pedestrian circulation.

Goal: Promote sufficient industrial activity to strengthen the community's economic base and insure continuing growth, while not unduly scattering industrial uses indiscriminately throughout the planning area or endangering the environment.

Objectives:

1. Allocate ample amounts of land for industrial uses while limiting the number of industrial areas to facilitate utility and transportation planning, environmental protection and long-range land development planning.
2. Encourage the development of new industries of diverse types to increase the number and range of employment opportunities and to promote economic stability in the planning area.
3. Encourage the development of facilities, services and standards for industrial areas to maximize the town's contribution to industry and to protect the environment.
4. Prevent and phase out incompatible non-industrial uses in those areas designated for industrial development.
5. Participate in the North Carolina Governor's Award Program, which would assist the town in becoming prepared for and more attractive to industrial development.

Goal: Encourage provision of high quality public and private utilities and services at locations and in quantities which are consistent with the needs of residents of the planning area and capable of expansion to meet foreseeable needs.

Objectives:

1. Maintain a continuing monitoring and updating of public facility needs, plans and priorities for construction and services.
2. Prepare a plan and program for acquiring, equipping, and maintaining a range of recreation and open space areas to meet the recreational needs of present and future planning area residents.
3. Extend water and sewer services to all developed portions of the planning area and require that all buildings or uses with access to the public water and sewer lines utilize the system.
4. Encourage close coordination between school programs and use of school facilities and the recreational programs of the town.

Goal: Plan and promote a transportation system which affords safety, convenient home to work trips, good access to industrial and shopping areas, and minimizes traffic congestion.

Objectives:

1. Encourage the use of the mutually adopted thoroughfare plan.

2. Encourage subdivision design and street layout which minimizes amounts of land devoted to streets.
3. Encourage the provision of ample parking spaces and convenient pedestrian circulation in connection with all forms of land use.
4. Minimize the number of driveway entrances into commercial property along busy streets.

LAND USE PLAN - UPDATE

What follows is a written and graphic description of a recommended pattern for community development based on the preceding sections of this study. The plan attempts to portray orderly and systematic growth by insuring such things as the compatibility of various land uses, good circulation patterns, availability of public utilities and services, and the intelligent use of the environment.

Residential Land Use

As illustrated in Figure 9, residential land development is divided into three classifications. This will encourage the provision of various housing types which will accommodate different income levels. Areas that are designated residential - agricultural will contain a low dwelling unit density surrounded or abutted by lands that are highly suitable for agricultural purposes. All of these areas are located in the one-mile extraterritorial jurisdiction. In these areas, public water and sewer services are presently unavailable. Thus, residential development at a low density, such as one or two dwelling units per acre, will insure that dwellings dependent upon private wells and septic tanks will provide a healthful environment. Moreover, development of this nature will protect agricultural land uses from an influx of uses that could render the land undesirable for farms and future planned developments.

Areas that are designated medium density residential will contain a high dwelling unit density, such as three dwelling units per acre. Most of these areas are located within the corporate limits in established neighborhoods exhibiting medium density characteristics and in sections of town where public water and sewer services are in existence or could easily be provided. The only other area that might contain a higher dwelling unit density includes the lands adjacent to N.C. 130 where public water service is available.

Areas that are designated high density residential will contain the highest dwelling unit density, such as six to ten dwelling units per acre (multi-family structures). These areas are located within the corporate limits where public water and sewer services are available. Some areas, such as the one south of the Seaboard Coastline Railroad, are located in sections of town where low-rent redevelopment projects would be beneficial.

Commercial Land Use

In planning for commercial development, it is necessary to distinguish between the various types of commercial activity and then match these activities with various locational factors that will assist in selecting suitable commercial sites. Thus, commercial activity may be classified as follows:

LAND USE PLAN - UPDATE



CHADBOURN
NORTH CAROLINA



LAND USE PLAN - UPDATE

LEGEND

- Low Density Residential - Agricultural
- Medium Density
- High Density
- Commercial
- Industrial
- Social & Cultural
- Open Space

CHADBOURN
NORTH CAROLINA



THE CHADBOURN LAND USE PLAN WAS PREPARED BY THE CHADBOURN TOWN BOARD AND THE CHADBOURN TOWN ENGINEER. THE PLAN IS BASED ON THE CHADBOURN TOWN MAP AND THE CHADBOURN TOWN ENGINEER'S SURVEY. THE PLAN IS SUBJECT TO THE APPROVAL OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES. THE PLAN IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE CHADBOURN TOWN BOARD.

Figure 9

Businesses Associated with the Central Business Area, such as department stores, variety stores, hardware stores, clothing stores, jewelry stores, and other such businesses usually having a relatively small amount of floor space and a high volume of customers.

Neighborhood Businesses, such as drug stores, grocery stores, small variety stores, and other such businesses catering to the residential neighborhoods in which they may be located.

Highway Serving Business Uses, such as motels, restaurants, large service stations, and other such businesses catering primarily to the passing motorist.

Shopping Centers, with uses ranging from nothing more than a concentration of a few stores catering to the surrounding residential area, to the regional shopping center, with several large stores, serving about the same function as the central business area.

Major locational factors that should be considered are the following:

Accessibility. Business uses need to be easily accessible from major streets and situated so as not to create traffic congestion.

Compatibility with Surrounding Uses or Perimeter Effects. Business uses should be located only in those areas where they will not have an adverse effect on the character of the area.

Convenience to Customers. Where possible, business uses should be located near the geographical center of the area being served.

Availability of Utilities. Business uses should normally be located only in those areas where the municipality can provide water and sewer facilities, fire protection and garbage collection.

Support Stability. Business enterprises should be considered in light of the population which can adequately support a given number of business ventures.

Using the locational factors, the background information, existing commercial land use, and the plan's goals and objectives, the following types and locations for commercial activity are proposed.

Central Business District (CBD). The CBD shall comprise an area that is generally located in the center of town. If this area is to remain a viable commercial area, the town should realize that the area needs to be revitalized. As a start, a CBD plan should be prepared, which would analyze such things as parking,

overall appearance, store remodelling, and automobile and pedestrian circulation.

Neighborhood Businesses. Neighborhood businesses may be either scattered or concentrated. They are usually designed to provide convenience and fast service to surrounding residential areas. Because of their potential location and nature of operation, each neighborhood business should be considered in light of such elements as off-street parking, traffic generation, effects on surrounding land uses, noise, visual aesthetics, and buffers. Neighborhood businesses are represented in Figure 9, as those commercial areas that are not concentrated in any one section of the planning area.

Highway Serving Businesses. These businesses are generally located on the major thoroughfares leading into and around developed areas in Chadbourn. Because of these potential locations, such businesses must provide an attractive appearance, ample parking, and be designed to minimize traffic congestion. In the past, many cities and towns have allowed such businesses to develop in a random and strip fashion along their major highways with the results being visual ugliness, poor circulation, increased traffic accidents, and waste of open space. Thus, it is desirable to encourage highway serving businesses to locate in pre-selected areas where a sufficient amount of land should be allocated to allow investors a certain degree of choice, while the town still has the benefit of controlling development.

Industrial Land Use

In planning for industrial development, several common physical oriented factors must be considered and they may be expressed as follows:

Topographical Conditions. Industries should be located on sites that are relatively level, well drained, and not subject to flooding.

Availability of Municipal Facilities and Services. Industrial sites should be either in or near the corporate limits where municipal facilities and services, such as public water and sewer and fire protection, are either provided or can be provided at a reasonable cost.

Transportation Facilities. Industries should be located where railroad and major highway access is available.

Land Use. Industries should be located in areas where they can be assured by the community that existing and proposed development in these selected areas will not be incompatible with various industrial operations.

Living-Work Relationship. Industries should be within easy commuting time of residential areas and accessible to major thoroughfare and transit routes directly connected with housing areas.

Range of Choice. Industries should be provided with several choices for location.

Using these locational factors, the background information existing, industrial land use, and the plan's goals and objectives, industrial activities are suitable for several sections of the Chadbourn Planning Area. These sections may best be explained by observing Figure 9.

Social and Cultural Land Use

Social and cultural land uses are dispersed throughout the Chadbourn Planning Area with no appreciable difference noted from the 1966 land use plan. Since many social and cultural land uses depend on the population to be served, existing social and cultural land uses should be adequate for the future, as no significant population growth is anticipated.

A major concern of Chadbourn's social and cultural development will be the provision of adequate recreational activities for town residents. Over the next few years, Chadbourn should concentrate on developing the community park adjacent to Miller Street and establishing a town recreation program that will meet the needs of all citizens of the town and all age ranges. A good starting place for providing a comprehensive recreation program and analyzing recreational needs is to prepare a recreation plan.

Open Space Land Utilization

It is suggested that portions of land in the Chadbourn Planning Area be preserved as open space. Generally, this land is located along ditches and stream courses where the soils are poor and flooding is an ever existing possibility. In this sense, most forms of development would not be suitable for such areas due to high construction costs and health and safety hazards. In addition, when open space lands are left in their natural state, such valuable functions as collecting and distributing storm and flood water, recharging ground water supplies, and providing a habitat for wildlife can continue with minimal interruption and damage to the environment. It may be feasible, however, to utilize open space areas for farming and limited forms of recreational activity, as such development would be compatible in nature to the preservation of open space.

Thoroughfare Plan

Figure 10 graphically depicts the thoroughfare plan for the planning area that was mutually adopted in 1966 by Chadbourn and the North Carolina State Highway Commission. This plan is designed to improve traffic circulation in the planning area by proposing new alignments of major highways.



PLAN OF THE

CHADBOURN
NORTH CAROLINA

THOROUGHFARE PLAN

LEGEND

Major Thoroughfares

Existing Alignment

New Alignment

CHADBOURN
NORTH CAROLINA



Figure 10

In addition to this adopted plan, emphasis should be placed on improving and maintaining local streets. The most immediate problem seems to be the paving of remaining dirt surfaced streets in the area. The Planning Board, Town Board, Town Manager, and Public Works Director should establish a list of paving and improvement priorities.

Perhaps the most significant street construction to be expected in the future will be residential streets in subdivisions. These streets should meet safe design standards, which will promote and form well-planned new neighborhoods. The best method of insuring street adequacy is for the town to enforce its subdivision regulations.

Subdivision Regulations

Subdivision regulations are those that govern the manner in which land is divided into lots and lots are laid out. They are designed to protect the public interest by insuring that the subdivision is planned and constructed in a manner that will provide for the health, safety, and general welfare of the community. The regulations should be such as to insure that the subdivision is planned and constructed in a manner that will provide for the health, safety, and general welfare of the community.

In the past, the town has not had any subdivision regulations. It is now necessary to have such regulations in order to insure that the subdivision is planned and constructed in a manner that will provide for the health, safety, and general welfare of the community.

Index

Index of the town records, including the records of the town board, the records of the town manager, and the records of the public works director. The index is designed to provide a convenient means of locating the records of the town.

PLAN IMPLEMENTATION

This section is devoted to various techniques which may be used to implement the concepts of the plan and achieve the plan's previously stated goals and objectives.

Zoning

Zoning regulations are particularly important to shaping land development. The ordinance helps to insure that land uses are properly located with respect to one another, that sufficient land is available for each type of use, and that density of development is suitable both to the level of community services available and to the natural features of the land.

During the fiscal year 1975-1976, the Zoning Ordinance for Chadbourn will be reviewed and revised to reflect current land use and development trends. In revising this Ordinance, particular attention should be addressed to the general provisions section and administrative procedures.

Subdivision Regulations

Subdivision regulations can insure that proper design standards are met as new areas are developed and that necessary improvements are provided in the subdivision. New home owners are assured that sanitary systems will function properly, that promised paving, storm drainage, curbing, and other improvements will be properly installed, and that accurate markers will be provided for property line surveys. The chief benefit of such regulations is their ability to prevent many future problems, while planned developments are still lines on paper rather than substandard lots sold to unsuspecting purchasers.

In the near future, the town should review its subdivision regulations. Particular attention should be addressed to procedural and administrative matters, definitions, and the addition of new provisions, such as regulations applying to sedimentation control and handicapped persons.

Codes

Housing, building, plumbing, electrical, and fire codes are an important part of any planning program. Properly enforced, they insure adequate health, sanitation and safety standards for community living. The State of North Carolina has adopted such codes and encourages municipalities to adopt the same.

The Town Board should review its adopted codes and consider additions that are appropriate. All codes should also be codified.

Annexation

It is desirable for development which occurs at urban densities to be inside the corporate limits so that it can benefit from the public services and utilities that such development requires for the health and safety of its residents. Annexation should be of special consideration when significant amounts of residential development are proposed outside the current corporate limits.

In considering zoning cases and the approval of subdivision plats, and mobile home parks, the Planning Board and Town Board should consider the probable desirability of annexation, and the timing thereof, for all proposed development. Additionally, consideration should be given to the compatibility of water and wastewater facilities utilized in developments in the extraterritorial area with regard to possible connection with the municipal systems at a later time.

In the future, annexation could be a possibility along N.C. 130, east of the corporate limits.

Housing Improvement

In addition to controlling new and existing residential land use through zoning, subdivision, and housing codes, there are forms of housing assistance programs available to help needy persons provide adequate shelter for themselves and their families. Avenues available for consideration include mortgage assistance and the new Section 8 Housing Assistance Payments Program. Through this program, HUD will provide housing assistance payments on behalf of eligible lower-income families (i.e. families whose income does not exceed 80% of the median income for the locality) occupying newly constructed, substantially relocated or existing housing. This payment will make up the difference between the approved rent for the unit and the amount the family is required to pay which is not less than 15% nor more than 25% of the family's adjusted income. Housing projects may be owned by private owners, both profit-motivated and non-profit, and by public housing agencies.

Other housing improvement measures that may be used include the following:

1. A housing authority may be formed.
2. Local organizations, such as civic clubs and the Chamber of Commerce may help organize and conduct neighborhood clean-up, paint-up, and fix-up campaigns. This should be done on a regularly scheduled basis.

3. Funds for community development in low to moderate income areas may be available from the Community Development Act of 1974.
4. All streets in residential areas should be paved with adequate drainage insured. This may include curb and guttering projects.

Commercial Growth

In addition to controlling commercial growth through zoning, the town should review the possibility of preparing a Central Business District Study. This study would suggest ways to revitalize the CBD and maintain it as a viable economic area for the town.

Industrial Growth

In addition to controlling industrial growth through zoning, the following additional measures may be desirable:

1. Review industrial prospects by considering such things as noise, visual unsightliness and/or water and air pollution. The Department of Natural and Economic Resources, Office of Environmental Management may be of some assistance in these areas.
2. Review industrial prospects by considering such things as site requirements, traffic generation, transportation needs of the industry, adequate utility services, and adequate buffers.
3. Chadbourn should participate in the North Carolina Governor's Award Program to assist it in becoming better prepared for and more attractive to industrial development. This effort can assure that development opportunities are presented to prospects in the context of town plans and capabilities of the planning area to assimilate growth.

Social and Cultural Growth

As noted in the proposed land use plan section, recreation will probably be the most important social and cultural aspect in the future. As a first step in achieving a desirable recreation program, the town should prepare a recreation plan. This plan would determine a course which would explain how to achieve the maximum benefit from existing facilities and programs as well as determining any appropriate improvements.

The town's subdivision regulations should require that recreational space be included in large new developments. The zoning regulations can require that recreational areas be included in mobile home parks. Since the town is developing a large community park, recreational space in developing areas would probably be

smaller in scale, such as playgrounds.

Open Space Land Utilization

Development in environmentally sensitive areas, such as flood plains should be completely discouraged through the zoning ordinance. However, if development is to occur, strict enforcement of the building codes as adopted under the National Flood Insurance Program is strongly recommended.

Transportation

In addition to complying with the mutually adopted thoroughfare plan, the following measures may be used to insure or improve Chadbourn's circulation pattern.

1. Utilize Powell Bill funds, local taxes, revenue sharing, and/or bond measures to improve local streets.
2. Utilize subdivision regulations to guide street development in new residential areas.
3. Existing dedicated streets and proposed streets should be carefully reviewed by the town to insure proper intersection alignment, and block width and length.
4. Curb and guttering of streets may be a desirable project in all sections of town to improve drainage. Powell Bill funds or local revenue may be used to accomplish this task. Since the whole town could not be curbed and guttered simultaneously, a priority list should be compiled based on need. Areas showing the greatest need for improved drainage should receive curb and guttering first.

General Revenue Sharing

The federal government is returning a certain percentage of the town's tax funds to the town for use as the town board sees fit, subject to certain restrictions. These funds can be utilized for many forms of community development projects. Careful consideration should be given the use of these funds in order to discourage the spending of general revenue sharing funds for items and projects which can be financed readily by other means.

Rural Development Act

The U.S. Congress has recently passed an act giving highest priority to the revitalization and development of rural areas (Public Law 92-419, August, 1972). This act has many provisions which could assist Chadbourn in implementing the land development plan, such as loans and grants for community facilities construction, industries, and housing. Money is only now becoming available under the act and all of its sections are not yet funded. However, the town board should become familiar with the act and aggressively seek financial assistance wherever possible.

Citizen Participation

In an effort to make the plan an effective guide for community growth, citizen participation should be encouraged. This should be a continuing process in which community goals and objectives are constantly being reviewed and updated.

Community Facilities and Services

The town should develop a comprehensive policy for the maintenance, improvement, and extension of community facilities and services, such as fire protection, and water and sewer services. A capital improvements budget, revenue sharing, bond measures, 201 facilities planning, and funds from the Rural Development Act will be useful in helping to achieve adequate community facilities and services.

Revitalization of the Planning Board

The most important means of implementing the concepts of this plan will be the local planning board, as they should spearhead all land use planning and enforcement efforts. Thus, the planning board needs to be revitalized immediately. Once revitalization is complete, the board should not become merely a zoning oriented board, but should actively engage in planning and making recommendations in such areas as downtown revitalization, recreation planning, and improving community appearance.

ENVIRONMENTAL ASSESSMENT STATEMENT

During the past several years, considerable legislation on the federal, state, and local governmental levels has been passed to assure that an environment of high quality will be maintained as development occurs. This plan has been designed with the intent of maximizing environmental protection. The following discussion outlines the general impacts the plan will have on the environment if it is carefully utilized.

Abstract

This study defines a pattern of orderly and systematic growth for the Town of Chadbourn and its environs based upon an analysis of physical, economic, and social conditions, local traditions and desires, and basic urban planning principles. Once this analysis was completed and a plan described, implementation strategies were offered.

Environmental Effects

Beneficial Effects:

1. Preservation of open space, flood plains, and stream banks, especially Horsepen Branch and Strawberry Swamp.
2. High density development and activities generating large volumes of traffic are located adjacent to existing transportation routes, such as N.C. 130 and the Seaboard Coastline Railroad, to deter traffic volume increases in residential areas.
3. More efficient use of developed and vacant land is being encouraged, especially in relation to commercial land use, as strip commercial development is discouraged.
4. Encouragement of good visual aesthetics and overall community appearance.
5. Upgrading of local streets is being encouraged to provide a cleaner, healthier, and safer environment. Paving of dirt surfaced streets will also decrease the possibility of erosion, sedimentation flow, and air pollution.
6. Upgrading of blighted neighborhoods is being encouraged.
7. Provisions of public water and sewer services is advocated for all residential development occurring at urban densities. Development will be allowed only at very low densities in areas not served by public utilities. This will minimize potential dangers to ground or

surface water and will militate against ill-planned developments occurring in excess of the environment's capacity to assimilate urban type development.

8. Revitalization of the Central Business District is encouraged, thus improving overall town appearance and lessening the demand for acquisition of large tracts of land for commercial development purposes.
9. Stricter enforcement and updating of the present zoning ordinance and subdivision regulations is advocated to insure that future development will occur in accordance with the land use plan.
10. Adverse environmental effects such as excess noise, pollution, and odors are being considered and minimized where possible through the recommended use of buffers and separation of incompatible types of land uses.

Adverse Effects

1. As even well-planned new development occurs, some natural vegetation must be destroyed, and there will be some increases in storm water run-off, as well as increased quantities of sewer effluent and solid waste.
2. As additional development occurs, open space will be consumed. Some of this space will be good quality farm land.
3. Construction of new utility lines and street improvements could cause at least short term adverse environmental impacts such as dust, sedimentation, and destruction of natural vegetation.

Unavoidable Adverse Environmental Effects

Effects of development which cannot be avoided entirely will be the loss of some natural vegetation, increases in storm run-off and waste products, and the potential for some urban sprawl.

Alternatives

Growth occurring without a land use plan could result in much more inefficient land use, overburdening of public utilities, and intrusion into environmentally sensitive areas. The town's ability to finance environmentally acceptable methods of disposing of its waste products and improving the living environment of its residents is predicated upon some economic and physical growth.

Alternative arrangements of land use were considered prior to arriving at those shown in the Land Use Plan. This selected arrangement was felt to be preferable from an environmental standpoint because:

- (a) the development is compact, implying fewer new streets and public utilities
- (b) development is generally limited to those areas served by public utilities
- (c) industrial uses are located where public services are available but where they can be isolated from other forms of incompatible land use
- (d) any high density development permitted in the outlying areas in the near future would have to rely upon on-site water and waste treatment facilities, thus creating incipient health problems which the town would have little hope of solving.

Relationship Between Short-Term Uses of the Environment and Maintenance of Long-Term Productivity

This plan proposes orderly and systematic growth which will encourage efficient land use and protection of natural features. Although some farm land and unused vacant areas will be built-up in coming years, the urban development will be efficiently planned and constructed, leaving undisturbed the rural character of much of the planning area and regions beyond its boundaries.

Irreversible and Irretrievable Commitments of Resources

The conversion of agricultural and wooded lands to urban uses cannot be reversed; however, a compact form of growth will minimize as much as possible the effects of the loss of the above lands in the planning area.

Applicable Federal, State, and Local Controls

Federal: National Environmental Policy Act of 1969

Land and Water Conservation Fund Act of 1964

Environmental Quality Act of 1970

Flood Disaster Protection Act of 1973

Executive Order 11514, March, 1970, Protection and Enhancement of Environmental Quality

Executive Order 11593, May 1971, Protection and Enhancement of the Cultural Environment

Rural Development Act of 1972

State: Water Use Act of 1967

Planning and Regulation of Development, Chapter 160A, Article 19

Soil Conservation District Law of 1937

Sedimentation Pollution Control Act of 1973

North Carolina Environmental Policy Act of 1971

"Rules and Regulations Governing the Control of Air Pollution,"
January 21, 1972

"Rules and Regulations, Classifications, and Water Quality Standards
Applicable to the Surface Waters of N.C." October 13, 1970

"Rules and Regulations Providing for the Protection of Public Water
Supplies," August 26, 1965; amended September 19, 1968

"Rules and Regulations Governing the Disposal of Sewage from any
Residence, Place of Business or Place of Public Assembly in North
Carolina," 8/26/71; 1/8/74

Local: Zoning Ordinance, 1970 (Plan recommends updating)

Subdivision Regulations (Plan recommends updating)

Building and Housing Codes

Mitigation Measures

The adoption and use of the plan by public and private groups and participation by the citizenry will mitigate adverse environmental effects. Continued enforcement and updating of all planning reports will also assist the community in this regard.

Problems and Objectives Raised by Other Agencies

There have been no problems or objectives raised by other agencies or organizations at this time.

SELECTED REFERENCES

Collier, William A., Jr., Land Development Plan, Chadbourn, North Carolina, Fayetteville, North Carolina: December, 1966.

Collier, William A., Jr., Land Use Survey and Analysis, Chadbourn, North Carolina, Fayetteville, North Carolina: April, 1966.

Collier, William A., Jr., Population and Economy, Chadbourn, North Carolina, Fayetteville, North Carolina: November, 1965.

Employment Security Commission of North Carolina, Bureau of Employment Security Research, North Carolina Labor Force Estimates, Raleigh, North Carolina: November, 1974.

Employment Security Commission of North Carolina, North Carolina Commuting Patterns, 1960 and 1970, Raleigh, North Carolina: March, 1970.

Employment Security Commission of North Carolina, "Report on Active Job Applicants Registered for Work with Employment Security Offices and Residing in the Area of Chadbourn," Raleigh, North Carolina: July, 1975.

Lonsdale, Richard E., Atlas of North Carolina, The University of North Carolina Press, Chapel Hill, North Carolina: 1967.

Moore, Gardner & Associates, Inc., Feasibility Study on Water and Waste-water Facilities for Central Columbus County, Greensboro, North Carolina: 1975.

North Carolina Department of Administration, Raleigh, North Carolina.

North Carolina Department of Natural and Economic Resources, "County and Community Data Sheets," Wilmington, North Carolina: January 31, 1975.

North Carolina Department of Revenue, "Analysis of Sales and Use Tax Collections and Gross Retail Sales by Counties and Business Groups."

North Carolina State Highway Commission, Planning and Research Department, "Thoroughfare Plan Map," Raleigh, North Carolina: 1966.

Sharpe, Bill, A New Geography of North Carolina, Vol. II, Raleigh, North Carolina: 1958.

U.S. Department of Commerce, Bureau of the Census:

PC(1) - 35B General Population Characteristics, North Carolina, 1960.

PC(1) - B35 General Population Characteristics, North Carolina, 1970.

First Count Information Tape, unpublished data, 1970.

HC(1) - B35 Detailed Housing Characteristics, North Carolina, 1970.

PC(1)-C35 General Social and Economic Characteristics, North Carolina, 1970.

State of North Carolina, Social Indicators, 1970.

Census of Agriculture, North Carolina, Volume 1 Area Reports, Part 26, 1969.

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